

Society Reports.

THE PHILADELPHIA NEUROLOGICAL SOCIETY.

Stated meeting, January 26, 1886.

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DR. WILLIAM OSLER then read a paper on "The Structure of Certain Gliomata."

He desired to call attention to the histological character of certain brain tumors which present peculiarities of structure separating them from the ordinary small-celled gliomata.

The specimens which he showed were from three cases, the features, clinical and anatomical, of which may be thus summarized :

CASE 1.—Girl aged sixteen, blind from third year ; intelligent ; head not large. Occasional convulsions and spasms of muscle of neck. Death sudden. Tumor occupied the surface of the left thalamus, and extended into the third ventricle. There was extensive dilatation of the lateral ventricles.

CASE 2.—Girl aged fifteen. Jacksonian epilepsy for over fourteen years. Small, firm tumor occupied the upper part of ascending convolution.

CASE 3.—Man aged forty. Head pain, mental disturbance, drowsiness, the chief symptoms. Tumor the size of a lemon occupied left anterior lobe of brain.

The physical characters of these three tumors differed considerably. In Case 1, the mass on the thalamus was firm, but the portion projecting into the third ventricle was soft, grayish in color, and looked like an actively growing neoplasm. In Case 2, the small tumor at the upper part of ascending frontal convolution resembled a patch of sclerosis, while in Case 3 the tumor had a large central area of fibro-caseous change, with a peripheral zone of actively growing grayish-red tissue.

Histologically these tumors are similar in the dense feltwork of fibres which make up the chief mass of each, the fibres varying somewhat in thickness and in closeness of arrangement. Careful observation of teased specimens shows that the fibres are, for the most part, in connection with cells, and so far the growths conform to the type of glioma. True, we do not find here the typical arrangement of small cells with delicate protoplasm and numerous fine ramifying processes which gives to many gliomas an appearance not unlike that of a small-celled sarcoma. There are gliomata, however, with larger and more irregular cells and with coarser fibres than the description in text-books would lead us to suppose, and it was more particularly certain characters of the cells in tumors of this kind that he wished to call attention to. A study of teased, fresh specimens can alone give a clear idea of the shape, size, and relations of the cell elements.

These tumors conform to the variety described as neuro-glioma by Klebs, who holds that the large ganglion-like cells found as such important constituents of these growths are derived directly from the nerve cells of the gray matter, and that in the development of this variety all the elements of the nerve tissue participate. Certainly the resemblance between many of the large cells and nerve elements is very striking, but I have not been able to satisfy myself of their relation to the preëxisting tissue parts. This is, of course, extremely difficult, but in a careful study of sections taken from the advancing regions of the growths, I have not met with appearances which would lead me to suppose that the nerve cells were in process of proliferation. Klebs states that he has demonstrated by means of osmic acid and gold chloride the nature of the cells and their processes, but this has not been confirmed, and I could not determine that the cells or fibres described above behaved in a characteristic manner with these reagents. That they are probably connective-tissue elements seems probable from an examination of a large number of the cells in teased preparations. Gradations and intermediate forms can be seen between cells closely resembling unipolar or bipolar nerve ganglia and the typical spider cells with innumerable processes. Gliomata of this form are not uncommon. Klebs described fourteen or fifteen, and of five cerebral tumors of the glioma type which I have met with, only two were of the small-celled variety.